

## CLAIMS

We claim:

- 1 1. A method of activating and authenticating a wireless device in a secondary  
2 wireless communication system co-located with a primary wireless communication  
3 system, the method comprising:  
4       masking the control and activation signal strength associated with the primary  
5 wireless communication system; and  
6       coupling control and activation signals of the secondary wireless communication  
7 system to the wireless device during the masking.
- 1 2. The method of claim 1, wherein:  
2       masking the control and activation signal strength further comprises devising an  
3 activation and control signal of the secondary wireless communication system so that it  
4 exceeds in magnitude the activation and control average signal strength of the primary  
5 wireless communication system as masked within defined spatial limits; and  
6       coupling control and activation signals further comprises operating the wireless  
7 device for activation purposes within the defined spatial limits.
- 1 3. The method of claim 1, wherein coupling control and activation signals further  
2 comprises generating control and activation responses mimicking control and activation  
3 scenarios of an interaction with the co-located wireless communication system.
- 1 4. The method of claim 1, wherein:  
2       masking further comprises blocking radiation of the higher activation and control  
3 average signal strength within a limited space at which the wireless device couples with  
4 activation and control signals.
- 1 5. The method of claim 1, wherein:

2           masking further comprises directionally controlling control and activation signal  
3 radiation of the secondary wireless communication system.

1       6.       The method of claim 1, wherein:

2           coupling further comprises providing both analog and digital control and  
3 activation signals.

1       7.       The method of claim 2, wherein the activation and control signal of the  
2 secondary wireless communication system operates at identical frequencies used by the  
3 control and activation average signal strength of the co-located wireless communication  
4 system.

1       8.       The method of claim 1, wherein the secondary wireless communication system is  
2 a private local communication system.

1       9.       The method of claim 8, wherein the primary wireless communication system is  
2 dominant wireless communication system.

1       10.      The method of claim 9, wherein the primary wireless communication system  
2 operate at a higher control and activation average signal strength.

1       11.      A secondary wireless communication system overlapped by a primary wireless  
2 communication system, and including radio access for activation and authentication of a  
3 wireless device in the secondary wireless communication system, the secondary wireless  
4 communication system comprising:

5           an automated private service activation (APSA) port for accepting access requests  
6 of a wireless device seeking activation in the secondary wireless communication system,  
7 the APSA port radiating access control channel signals within limited spatial constraints;  
8 and

9           a localized space for operating the secondary wireless communication system for  
10 wireless devices activated by the APSA port.

1    12.    The secondary wireless communication system of claim 11, wherein the APSA  
2    port provides the access control channel radiating signals at a level exceeding a signal  
3    level of the secondary wireless communication system only within limited spatial  
4    constraints.

1    13.    The secondary wireless communication system of claim 11, wherein the APSA  
2    port is part of a base station having both analog communication channels and digital  
3    communication channels.

1    14.    The secondary wireless communication system of claim 11, wherein the APSA  
2    port comprises a surface covering an antenna for placing a wireless device in proximity to  
3    the surface to achieve access and authentication, wherein the access control channel  
4    radiated signal exceeds a control channel signal level of the primary wireless  
5    communication system.

1    15.    The secondary wireless communication system of claim 11, wherein the APSA  
2    port further includes an antenna accessible to a wireless device seeking access and  
3    authentication that includes shielding that blocks a control signal level of the overlapping  
4    primary wireless communication system.

1    16.    The secondary wireless communication system of claim 11, wherein the primary  
2    wireless communication system is a dominant wireless communication system over the  
3    secondary communication system.

1 17. A method of accessing and achieving authentication from a secondary wireless  
2 communication system in a region overlapped by a dominant wireless communication  
3 system, the method comprising:  
4 creating an access signal space in which radiated access control signal levels of the  
5 secondary wireless communication system within the access signal space exceed access  
6 control signal levels of the dominant wireless communication system;  
7 receiving a wireless device seeking access to the secondary wireless  
8 communication system within the access signal space;  
9 receiving a search from the wireless device for a strongest control channel;  
10 selecting the control channel of the secondary wireless communication system by  
11 reason of the proximity of the wireless device within the access space; and  
12 authorizing and authenticating the wireless device for operation within the  
13 secondary wireless communication system.

1 18. The method of claim 17, further comprising:  
2 enabling the secondary wireless communication system to interwork with the  
3 dominant wireless communication system.

1 19. The method of claim 17, further comprising:  
2 billing service while in the secondary wireless communication system through the  
3 dominant wireless communication system.

1 20. The method of claim 17, wherein the wireless device receives a number  
2 associated with the wireless device and service provider information in advance of  
3 accessing the secondary wireless communication system for allowing administration of  
4 services within the secondary wireless communication system.